

ABSTRACT

Disclosed herein are phenol oxidizing enzymes obtainable from species of *Stachybotrys* which are useful in modifying the color associated with dyes and colored compounds, as well as in anti-dye transfer applications. Also disclosed
5 herein are biologically-pure cultures of strains of the genus *Stachybotrys*, designated herein *Stachybotrys parvispora* MUCL 38996 and *Stachybotrys chartarum* MUCL 38898, which are capable of naturally-producing the novel phenol oxidizing enzymes.

Disclosed herein is the amino acid and nucleic acid sequence for *Stachybotrys* phenol oxidizing enzymes as well as expression vectors and host cells
10 comprising the nucleic acid. Disclosed herein are methods for producing the phenol oxidizing enzyme as well as methods for constructing expression hosts. Disclosed herein are enzyme compositions comprising phenol oxidizing enzymes obtainable from species of *Stachybotrys*.

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